Analytical Laboratory

13339 Hagers Ferry Road
Huntersville, NC 28078-7929
McGuire Nuclear Complex - MG03A2
Phone: 980-875-5245 Fax: 980-875-4349

Order Summary Report

Order Number: **J12040028**

Project Name: NPDES - MONTHLY

Customer Name(s): Sue Wallace, Matthew Dorn, Mark Harper, Todd Spade, Tara Thomas, Matthew

Customer Address: 11021 BROWER RD.

NORTH BEND, OH 45052

Lab Contact: Therona T James Phone: 980-875-4795

Report Authorized By: (Signature) Therona James 2012.04.16 13:32:42 -04'00' **Date:** 4/13/2012

Program Comments:

Miami Fort April NPDES - Week 1

Data Flags & Calculations:

Any analytical tests or individual analytes within a test flagged with a Qualifier indicate a deviation from the method quality system or quality control requirement. The qualifier description is found at the end of the Certificate of Analysis (sample results) under the qualifiers heading. All results are reported on a dry weight basis unless otherwise noted.

Data Package:

This data package includes analytical results that are applicable only to the samples described in this narrative. An estimation of the uncertainty of measurement for the results in the report is available upon request. This report shall not be reproduced, except in full, without the written consent of the Analytical Laboratory. Please contact the Analytical laboratory with any questions. The order of individual sections within this report is as follows:

Job Summary Report, Sample Identification, Technical Validation of Data Package, Analytical Laboratory Certificate of Analysis, Analytical Laboratory QC Reports, Sub-contracted Laboratory Results, Customer Specific Data Sheets, Reports & Documentation, Customer Database Entries, Test Case Narratives, Chain of Custody (COC)

Certification:

The Analytical Laboratory holds the following State Certifications : North Carolina (DENR) Certificate #248, South Carolina (DHEC) Laboratory ID # 99005. Contact the Analytical Laboratory for definitive information about the certification status of specific methods.

The results in this report meet NELAP requirements through New York State Department of Health Certification # 11717.. Certified parameters are designated with an "N" in the analytical report.

Sample ID's & Descriptions:

Sample ID	Plant/Station	Collection Date and Time	Collected By	Sample Description
2012007573	MIAMI-FORT	03-Apr-12 7:01 AM	M. Dorn	OUTFALL 002
2012007574	MIAMI-FORT	03-Apr-12 7:39 AM	M. Dorn	OUTFALL 608

2 Total Samples

Technical Validation Review

Checklist:

COC and .pdf report are in agreement with sample totals and analyses (compliance programs and procedures).	☑ Yes	☐ No
All Results are less than the laboratory reporting limits.	☐ Yes	☑ No
All laboratory QA/QC requirements are acceptable.	☑ Yes	☐ No
The Vendor Laboratories have been qualified by the Analytical Laboratory	Yes	

Report Sections Included:

- ☑ Job Summary Report
- ☑ Sample Identification
- ☑ Technical Validation of Data Package
- ☑ Analytical Laboratory Certificate of Analysis
- ☐ Analytical Laboratory QC Report
- ☑ Sub-contracted Laboratory Results
- ☐ Customer Specific Data Sheets, Reports, & Documentation
- ☐ Customer Database Entries
- ☑ Chain of Custody
- ☐ Electronic Data Deliverable (EDD) Sent Separately

Reviewed By: Mary Ann Ogle Date: 4/13/2012

Certificate of Laboratory Analysis

This report shall not be reproduced, except in full.

Order # J12040028

Site: OUTFALL 002 **Sample #: 2012007573**
Collection Date: 03-Apr-12 7:01 AM Matrix: NPDES

Analyte	Result	Units	Qualifiers	RDL	DF	Method	Analysis Date/Time	Analyst
TOTAL DISSOLVED SOLIDS								
Vendor Parameter	**Complete**				1	V_PACE		

Site: OUTFALL 608 **Sample #: 2012007574**
Collection Date: 03-Apr-12 7:39 AM Matrix: NPDES

Analyte	Result	Units	Qualifiers	RDL	DF	Method	Analysis Date/Time	Analyst
ALKALINITY (FIXED END POINT 4.5)								
Alkalinity (mg/L CaCO3)	**1300**	mg/L (CaCO3)	N	0.1	1	SM2320B	04-Apr-12 14:02	TJA7067
INORGANIC IONS BY IC								
Chloride	**5900**	mg/L	N	100	1000	EPA 300.0	05-Apr-12 09:40	JAHERMA
Fluoride	**6.2**	mg/L	N	5	50	EPA 300.0	05-Apr-12 09:40	JAHERMA
Sulfate	**16000**	mg/L	N	300	3000	EPA 300.0	05-Apr-12 09:40	JAHERMA
TOTAL METALS BY ICP								
Boron (B)	**314**	mg/L	N	2.5	50	EPA 200.7	09-Apr-12 12:32	MHH7131
Iron (Fe)	**0.114**	mg/L	N	0.01	1	EPA 200.7	09-Apr-12 12:32	MHH7131
Manganese (Mn)	**0.043**	mg/L	N	0.005	1	EPA 200.7	09-Apr-12 12:32	MHH7131
TOTAL RECOVERABLE METALS BY ICP-MS								
Arsenic (As)	**< 20**	ug/L	N	20	1	EPA 200.8	10-Apr-12 10:49	KRICHAR
Barium (Ba)	**126**	ug/L	N	20	1	EPA 200.8	10-Apr-12 10:49	KRICHAR
Cadmium (Cd)	**< 20**	ug/L	N	20	1	EPA 200.8	10-Apr-12 10:49	KRICHAR
Chromium (Cr)	**< 20**	ug/L	N	20	1	EPA 200.8	10-Apr-12 10:49	KRICHAR
Copper (Cu)	**< 20**	ug/L	N	20	1	EPA 200.8	10-Apr-12 10:49	KRICHAR
Lead (Pb)	**< 20**	ug/L	N	20	1	EPA 200.8	10-Apr-12 10:49	KRICHAR
Zinc (Zn)	**< 20**	ug/L	N	20	1	EPA 200.8	10-Apr-12 10:49	KRICHAR
TOTAL DISSOLVED SOLIDS								
Vendor Parameter	**Complete**				1	V_PACE		
TOTAL SUSPENDED SOLIDS								
Vendor Parameter	**Complete**				1	V_PACE		

April 11, 2012

Terry Whitner
Duke Energy Carolinas, LLC
PO Box 37929
DPEHS
Charlotte, NC 28237

RE: Project: J12040028
Pace Project No.: 92115795

Dear Terry Whitner:
Enclosed are the analytical results for sample(s) received by the laboratory on April 04, 2012. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

This report was revised 4/11/12 to correct a sample collection time error.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kevin Herring

kevin.herring@pacelabs.com
Project Manager

Enclosures

CERTIFICATIONS

Project: J12040028
Pace Project No.: 92115795

Asheville Certification IDs
2225 Riverside Dr., Asheville, NC 28804
Florida/NELAP Certification #: E87648
Massachusetts Certification #: M-NC030
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
South Carolina Certification #: 99030001
Virginia Certification #: 00072
West Virginia Certification #: 356
Virgina/VELAP Certification #: 460147

Pace Analytical Services, Inc.
205 East Meadow Road - Suite A
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(336)623-8921

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2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SAMPLE SUMMARY

Project: J12040028
Pace Project No.: 92115795

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92115795001	**2012007573**	Water	04/03/12 07:01	04/04/12 15:44
92115795002	**2012007574**	Water	04/03/12 07:39	04/04/12 15:44

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SAMPLE ANALYTE COUNT

Project: J12040028
Pace Project No.: 92115795

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92115795001	**2012007573**	SM 2540C	LMD	1	PASI-A
92115795002	**2012007574**	SM 2540C	LMD	1	PASI-A
		SM 2540D	LMD	1	PASI-A

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HITS ONLY

Project: J12040028
Pace Project No.: 92115795

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92115795001	**2012007573**					
SM 2540C	Total Dissolved Solids	618	mg/L	25.0	04/06/12 11:31	
92115795002	**2012007574**					
SM 2540C	Total Dissolved Solids	34400	mg/L	500	04/06/12 15:00	
SM 2540D	Total Suspended Solids	24.8	mg/L	5.0	04/09/12 16:22	

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PROJECT NARRATIVE

Project: J12040028
Pace Project No.: 92115795

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: Duke Energy
Date: April 11, 2012

General Information:
2 samples were analyzed for SM 2540C. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: J12040028
Pace Project No.: 92115795

Method: **SM 2540D**
Description: 2540D Total Suspended Solids
Client: Duke Energy
Date: April 11, 2012

General Information:
1 sample was analyzed for SM 2540D. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: J12040028
Pace Project No.: 92115795

Sample: 2012007573 **Lab ID: 92115795001** Collected: 04/03/12 07:01 Received: 04/04/12 15:44 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**618**	mg/L	25.0		1		04/06/12 11:31		

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ANALYTICAL RESULTS

Project: J12040028
Pace Project No.: 92115795

Sample: 2012007574 **Lab ID: 92115795002** Collected: 04/03/12 07:39 Received: 04/04/12 15:44 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**34400**	mg/L	500		1		04/06/12 15:00		
2540D Total Suspended Solids	Analytical Method: SM 2540D								
Total Suspended Solids	**24.8**	mg/L	5.0		1		04/09/12 16:22		

QUALITY CONTROL DATA

Project: J12040028
Pace Project No.: 92115795

QC Batch: WET/20367 — Analysis Method: SM 2540C
QC Batch Method: SM 2540C — Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 92115795001, 92115795002

METHOD BLANK: 747320 — Matrix: Water
Associated Lab Samples: 92115795001, 92115795002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	04/06/12 11:28	

LABORATORY CONTROL SAMPLE: 747321

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	250	262	105	80-120	

SAMPLE DUPLICATE: 747322

Parameter	Units	92115676005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	328	330	1	10	

SAMPLE DUPLICATE: 747323

Parameter	Units	92115763003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	207	198	4	10	

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QUALITY CONTROL DATA

Project: J12040028
Pace Project No.: 92115795

QC Batch: WET/20385 — Analysis Method: SM 2540D
QC Batch Method: SM 2540D — Analysis Description: 2540D Total Suspended Solids
Associated Lab Samples: 92115795002

METHOD BLANK: 747950 — Matrix: Water
Associated Lab Samples: 92115795002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	2.5	04/09/12 16:17	

LABORATORY CONTROL SAMPLE: 747951

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Suspended Solids	mg/L	250	268	107	80-120	

SAMPLE DUPLICATE: 747952

Parameter	Units	92115787002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	ND	ND		10	

SAMPLE DUPLICATE: 747953

Parameter	Units	92115566001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	18.2	18.2	0	10	

QUALIFIERS

Project: J12040028
Pace Project No.: 92115795

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Acid preservation may not be appropriate for 2-Chloroethylvinyl ether, Styrene, and Vinyl chloride.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-A Pace Analytical Services - Asheville

Pace Analytical®
www.pacelabs.com

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: J12040028
Pace Project No.: 92115795

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92115795001	**2012007573**	SM 2540C	WET/20367		
92115795002	**2012007574**	SM 2540C	WET/20367		
92115795002	**2012007574**	SM 2540D	WET/20385		

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST FORM

Duke Energy Analytical Laboratory
Mail Code MGO3A2 (Building 7405)
13339 Hagers Ferry Rd
Huntersville, N. C. 28078
(704) 875-5245 Fax: (704) 875-4349

Analytical Laboratory Use Only

LIMS # J12040028 | Sample Class NPDES | Samples Originating From OHIO

Logged By S.A | Date & Time 4/4/12 1150

Cooler Temp (C) 1.3

PACE
PO #146146

SAMPLE PROGRAM
NPDES

[19]Page 1 of 1
DISTRIBUTION
ORIGINAL to LAB,
COPY to CLIENT

Customer must Complete

1)Project Name: MIAMI-FORT NPDES Monthly (Week 1-April 3, 2012)
2)Phone No:
3)Client: Miami-Fort - Sue Wallace, Tara Thomas, Matt Hoyt
4)Fax No:
5)Business Unit:
6)Process:
7)Resp. Center To:
8)Project ID:
9)Activity ID:
10)Mail Code:

MR #

Customer to complete all appropriate non-shaded areas.

[15]Preserv.: 1=HCL 2=H_2SO_4 3=HNO_3 4=Ice 5=None

LAB USE ONLY [11]Lab ID	[12]Chem Desktop No.	[13]Sample Description or ID	[14]Collection Information Date	Time	Signature	[17]Comp.	[18]Grab	[16]Analyses Required: TDS (PACE)	Cl, F, SO4	B, Fe, Mn, As, Ba, Cd, Cr, Cu, Pb, Zn	TSS (PACE)	Alkalinity
								4	4	3	4	4
2012007573		Outfall 002	4/3/12	07:01			X	1				
2012007574		Outfall 608	4/3/12	07:39	(M. Dorn)		X	1	1	1	2	1

Customer to complete appropriate columns to right.

Customer to sign & date below - fill out from left to right.

1) Relinquished By	Date/Time 4/3/2012 08:08	2) Accepted By Courier	Date/Time 4/3/12 1000
3) Relinquished By Courier	Date/Time 4/4/12 1000	4) Accepted By S. Harris	Date/Time 4/4/12 1000
5) Relinquished By S. Harris (M. Dorn)	Date/Time 4/4/12 1515	6)Accepted By: pmd 4/4/12 1515	Date/Time
7)Relinquished By	Date/Time	8)Accepted By:	Date/Time
9)Seal/Locked By	Date/Time 4/3/2012 08:08	10) Seal/Lock Opened By S. Harris	Date/Time 4/4/12 1030
11)Seal/Locked By	Date/Time	12)Seal/Lock Opened By	Date/Time

Customer, IMPORTANT! Please indicate desired turnaround.

[22]Requested Turnaround
10 Days X
*7 Days
*48 Hr
*Other
* Add. Cost Will Apply
4/11/12

Comments: ICP TOT - B, Fe, Mn IMS-TRM - As , Ba, Cd, Cr, Cu, Pb, Zn Fe HACH= 0.00mg/L